DOCUMENT RESUME

ED 481 363 CE 085 578

TITLE	Warehousing Competency Profile. Apprenticeship Training.
INSTITUTION	Alberta Learning, Edmonton. Apprenticeship and Industry Training.
ISBN	ISBN-0-7785-2561-9
PUB DATE	2003-00-00
NOTE	44p.
AVAILABLE FROM	For full text: http://www.tradesecrets.org/occupations/202/pdf/202_competency_profile.pdf.
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	*Apprenticeships; *Competency Based Education; *Course Content; Course Descriptions; Curriculum; Curriculum Development; Delivery Systems; Employment Qualifications; Equipment Utilization; Facility Planning; Foreign Countries; Industrial Training; Job Skills; Occupational Safety and Health; Postsecondary Education; Skilled Occupations; Storage; Student Certification; *Trade and Industrial Education; *Warehouses
IDENTIFIERS	*Alberta; Inventory Control

ABSTRACT

This document presents information about the apprenticeship training program of Alberta, Canada, in general and the warehousing program in particular. The first part of the document discusses the following items: Alberta's apprenticeship and industry training system; the apprenticeship and industry training committee structure; local apprenticeship committees; provincial apprenticeship committees; the Alberta Apprenticeship and Industry Training Board; safety education; legal and administrative aspects of safety; technical training establishment; procedures for recommending revisions to the course outline; the apprenticeship route toward certification as a warehousing technician; and a warehousing training profile. The second part of the document presents course outlines for the warehousing program's basic, intermediate, and technician levels of technical training. Selected topics covered in the three levels are as follows: Alberta's warehousing industry; warehouse activities and their implications to enterprises; warehouse technology; communication and comprehension skills; warehouse safety skills; basic material handling operations and procedures; material handling and packaging equipment; computers in warehousing; material storage and storage systems; transportation and traffic; material identification; quality customer service; fundamentals of warehouse business operations; industry-specific warehousing; warehouse business management; inventory control procedures; warehouse design and planning; quality management; and workplace supervisory skills. The course outlines detail course topics, intended outcomes, specific behavioral objectives, and times allotted for each topic covered. (MN)

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APPRENTICESHIP TRAINING

Warehousing Competency Profile

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Alberta
LEARNING
Apprenticeship and Industry Training

ALBERTA LEARNING CATALOGUING IN PUBLICATION DATA

Alberta. Alberta Learning. Apprenticeship and Industry Training.
Warehousing competency profile.

ISBN 0-7785-2561-9

1. Warehouses -- Management - Study and teaching - Alberta. 2. Apprentices - Alberta. 3. Occupational training - Alberta. I. Title. II. Series: Apprenticeship training.

HD4885.C2.W37.A333 2003 373.27

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Care has been taken to acknowledge all sources and references in these materials. If there are any inadvertent omissions, please contact Alberta Learning, 10th floor, Commerce Place, Edmonton, Alberta, Canada, T5J 4L5.

Warehousing Competency Profile

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APPRENTICESHIP AND INDUSTRY TRAINING SYSTEM

The Apprenticeship and Industry Training System provides for three different levels of certification, Compulsory Certification in a Designated Trade, Optional Certification in a Designated Trade, and Certification in a Designated Occupation. Certification in a designated occupation indicates an individual has met the standards for certification in an industry-developed program designated under the *Apprenticeship and Industry Training Act*.

Occupation Training is developed by industry and approved by the Apprenticeship and Industry Training Board. Training can consist of on the job training, formal technical training, or a combination of formal and on the job training. Training may be available through industry employers, or public and private training institutions located in or out of Alberta. Training is not available through the Apprenticeship and Industry Training system. In order to obtain an occupation certification a candidate must complete the training and meet the standards established by industry.

To obtain Warehousing Certification a candidate must register as a trainee with Alberta Learning. There are three Warehousing Certificates available. Basic Level Warehousing Certification after the trainee completes the Occupation Committee approved Basic Level modules and 1500 hours (one year) of work experience. Intermediate Level certification requires Basic Level Certification as a prerequisite, completion of the Occupation Committee approved Intermediate Level modules and 1500 hours (one year) of work experience. Technician Level certification requires Intermediate Certification as a prerequisite, completion of the Occupation Committee approved Technician Level modules and 1500 hours (one year) of work experience.

The Apprenticeship and Industry is driven by industry. The Alberta Apprenticeship and Industry Training Board relies on a network of industry committees representing the interests of over 50 trades and occupations. An Occupational Committee, consisting of employer and employee representatives from the occupation develops occupation standards for occupational certification.

The occupation committee develops the standards for training and certification as set out in this Occupation Competency Profile. A person who has completed the training and met industry standards for any level of certification in Warehousing can apply for certification at any client services office of Alberta Learning, Apprenticeship and Industry Training. An approved candidate will have to successfully pass an industry examination administered by Alberta Learning.

OCCUPATION COMMITTEE (OC)

The Board establishes an occupational committee for each designated occupation and based on Occupation Committee recommendation, appoints a Presiding Officer and members for terms up to three years. It is the responsibility of the occupational committee make recommendations to the board on any matter concerning standards and requirements for certification in their occupation; consult with industry on issues affecting the occupation; represent interests of employers and employees across the industry and regions; communicate issues and recommendations to the Board; communicate with industry at large on matters before the occupational committee; promote the apprenticeship and industry training system in Alberta.

WAREHOUSING OCCUPATION COMMITTEE MEMBERS

Mr. R. Chapman	Calgary	Presiding Officer
Mr. M. McSorley	Calgary	Employer
Mr. R. Johnson	Edmonton	Employer
Mr. R. Richards	Edmonton	Employer
Mr. J. Strong	Fort McMurray	Employer
Mr. R. Wilbern	Hinton	Employer
Mr. M. Conrad	Calgary	Employee
Mr. L. Foote	Edmonton	Employee
Mr. L. Wood	Edmonton	Employee
Mr. W. Workun	Fort McMurray	Employee
Mr. S. Smith	Grande Prairie	Employee

The Warehousing Occupation Committee would like to acknowledge the significant contribution to Warehousing Training by Bob Johnson (1943-2003)

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THE ALBERTA APPRENTICESHIP AND INDUSTRY TRAINING BOARD (BOARD)

The 13 members of the government appointed Board are aware of the training and certification needs of tradespeople and employers. Many Board members have previously served on an LAC (Local Apprenticeship Committee), PAC (Provincial Apprenticeship Committee) or (OC) Occupational Committees. The Board responds to industry's needs and

- Sets training and certification standards in all trades
- Approves the technical training to be delivered by training establishments
- Encourages the development of alternate methods of technical training delivery
- Makes recommendations to the Minister of Learning about the designation of trades and occupations
- Creates LACs, PACs, OTCs and appoints their members
- Advises the Minister on the labour market's need for skilled and trained workers

SAFETY EDUCATION

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance in industry training programs in Alberta. These responsibilities are shared and require the joint efforts of employers and employees. Controlling the variables and behaviors that may contribute to or cause an accident or injury can create safe learning experiences and environments. It is generally recognized that a safe attitude contributes to an accident free environment. Everyone will benefit as a result of a healthy safe attitude towards prevention of accidents. A tradesperson may be exposed to more hazards than others in the work force. Therefore, tradespersons should be familiar and comply with the Occupational Health and Safety Act and Regulations respecting personal safety and the safety in the work place.

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Legal and Administrative Aspects of Safety

Accident prevention and the provisions of safe working conditions are the responsibilities of an employer and employee.

Employer's Responsibilities:

- providing and maintaining safety equipment, protective devices and clothing.
- enforcement of safe working procedures.
- safeguards for machinery, equipment and tools.
- observance of all accident prevention regulations.
- training of employees in safe use and operation of equipment.

Employee's Responsibilities:

- working in accordance with the safety regulations pertaining to job environment.
- working in such a way as not to endanger themselves or fellow employees.
- Safe use of all equipment and supplies provided by the employer

FORMAL OR TECHNICAL TRAINING

Formal training for occupations falls outside the administrative scope of Alberta Apprenticeship and industry Training. Formal training may be available through colleges and institutes in Alberta or outside the province. Contact Alberta Learning Apprenticeship and Industry Training, Industry Programs and Standards for more information.

The technical training in the Warehousing Occupation is provided by:

- Fairview College
- NorQuest College
- Chinook College

PROCEDURES FOR RECOMMENDING REVISIONS TO THE COMPETENCY PROFILE

This competency profile has been prepared by the Warehousing Occupation Committee in partnership with Industry Programs and Standards of the Apprenticeship and Industry Training Division of Alberta Learning. This course outline was approved on May 23, 2003 under the authority of the Alberta Apprenticeship and Industry Training Board on a recommendation from the Provincial Occupation Committee. Valuable input is acknowledged from industry and the institutions. Any concerned citizen or group in the Province of Alberta may make recommendations for change by writing to:

Apprenticeship and Industry Training
Industry Programs and Standards
10th floor, Commerce Place
10155-102 Street
Edmonton, AB T5J 4L5

It is requested that recommendations for change refer to specific areas and state references used. Recommendations received will be placed before regular meetings of the Provincial Apprenticeship Committee.

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WAREHOUSING OCCUPATION TECHNICAL TRAINING PROFILE

Warehousing Basic
(7 Weeks x 30 Hours Per Week – Total of 210 Hours)

SECTION ONE

INTRODUCTION AND OVERVIEW OF WAREHOUSE OPERATIONS
30 Hours

A	B	C
Introduction 5 Hours	Basic Warehouse Functions 10 Hours	Job Skills 10 Hours

D	E
Warehouse Technology 3 Hours	Related Operations 2 Hours

SECTION TWO

COMMUNICATION AND COMPREHENSION SKILLS
30 Hours

A	B	C
Verbal Communication 10 Hours	Written Communications 10 Hours	Warehouse Calculations and Measurements 10 Hours

SECTION THREE

WAREHOUSE SAFETY SKILLS
30 Hours

A	B	C
Basic First Aid / CPR 10 Hours	Occupational Health and Safety / Due Diligence 1 Hour	Transportation of Dangerous Goods 1 Hour

D	E	F
Personal Safety Procedures and Equipment 3 Hours	Safe Lifting, Carrying and Repetitive Strain Injury Control 3 Hours	Environmental Protection 3 Hours

G	H
Emergency Response Procedures 2 Hours	Hazard Identification and Control Procedures 2 Hours

SECTION FOUR

BASIC MATERIAL HANDLING OPERATIONS AND PROCEDURES
30 Hours

A	B	C
Receiving 5 Hours	Stocking 5 Hours	Storing 5 Hours

D	E	F
Order Generation and Picking 2 Hours	Issuing and Product Allocation 2 Hours	Packing and Shipping 5 Hours

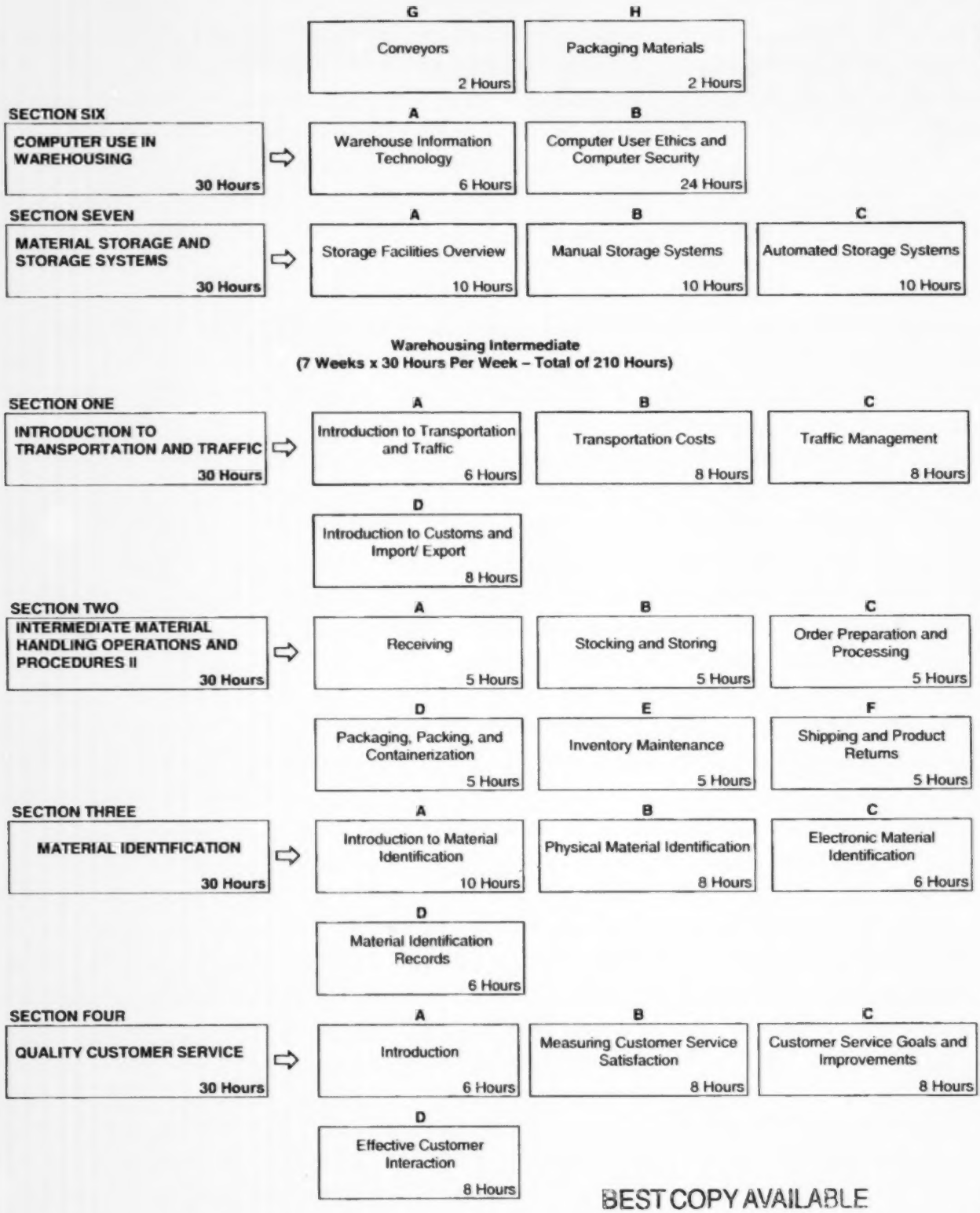
G	H	I
Stock Maintenance 2 Hours	Product Returns 2 Hours	Introduction to Physical Inventory Counting 2 Hours

SECTION FIVE

MATERIAL HANDLING AND PACKAGING EQUIPMENT
30 Hours

A	B	C
Introduction 2 Hours	Small Tools 2 Hours	Non-powered Wheeled Material Handling Equipment 2 Hours

D	E	F
Counterbalance Forklift Trucks 12 Hours	Narrow Aisle Forklifts 6 Hours	Cranes 2 Hours



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SECTION FIVE

FUNDAMENTALS OF WAREHOUSE BUSINESS OPERATIONS — **30 Hours**

A	B	C
Introduction — 4 Hours	Business Operations Measurements — 14 Hours	Activity Measurements — 12 Hours

SECTION SIX

INDUSTRY SPECIFIC TRAINING — **30 Hours**

A
Industry Specific Training — 30 Hours

Warehousing Technician
(7 Weeks x 30 Hours Per Week – Total of 210 Hours)

SECTION ONE

FUNDAMENTALS OF WAREHOUSE BUSINESS MANAGEMENT — **30 Hours**

A	B	C
Operational Objectives — 6 Hours	Strategic Planning and Operational Decision Implementation — 6 Hours	Goal Setting and Time Management — 6 Hours

D	E
Management Styles and Decision Making Techniques — 6 Hours	Ethical Considerations in Warehousing — 6 Hours

SECTION TWO

FUNDAMENTALS OF PURCHASING PROCEDURES — **30 Hours**

A	B	C
Scope of Purchasing — 5 Hours	Purchasing Systems — 10 Hours	Purchasing Ethical and Legal Principles — 5 Hours

D
Purchasing Techniques — 10 Hours

SECTION THREE

FUNDAMENTALS OF INVENTORY CONTROL PROCEDURES — **30 Hours**

A	B	C
Overview of Inventory — 6 Hours	Inventory Value, Costs, & Classification — 6 Hours	Forecasting Techniques — 6 Hours

D	E
Methods of Inventory Management — 6 Hours	Physical Inventory Procedures — 6 Hours

SECTION FOUR

FUNDAMENTALS OF WAREHOUSE DESIGN AND PLANNING — **30 Hours**

A	B	C
Introduction — 3 Hours	Traffic and Material Storage — 6 Hours	Facility Equipment and Material Selection — 6 Hours

D
Warehouse Design Project — 15 Hours

SECTION FIVE

FUNDAMENTALS OF QUALITY MANAGEMENT — **30 Hours**

A	B	C
Quality Management — 10 Hours	ISO Standards — 10 Hours	Putting Quality into the Warehouse — 10 Hours

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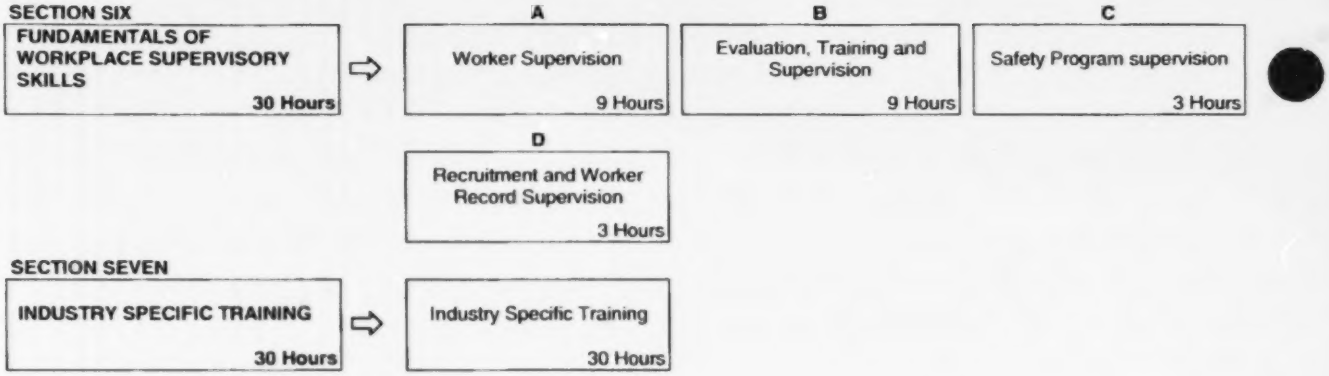

NOTE: ..THE HOURS STATED ARE FOR GUIDANCE AND WILL BE ADHERED TO AS CLOSELY AS POSSIBLE. HOWEVER, ADJUSTMENTS WILL BE MADE BY THE TRAINING PROVIDER AS REQUIRED FOR THE RATE OF TRAINEE LEARNING, STATUTORY HOLIDAYS, REGISTRATION AND EXAMINATION.

BASIC LEVEL TECHNICAL TRAINING

WAREHOUSING OCCUPATION
COMPETENCY PROFILE

SECTION ONE .....INTRODUCTION AND OVERVIEW OF WAREHOUSE OPERATIONS ..... 30 HOURS

A. Introduction.....5 Hours

Competency: Define warehouse and the Alberta warehousing industry.

1. Describe the importance of warehousing and the impact warehousing has on Alberta.
   a) size of industry (economic, manpower)
   b) objective of warehouse operations
2. Identify the different types of warehouse operations, why they are necessary, and some of the specialized characteristics of the various operations.
   a) heavy industry / maintenance
   b) bulk
   c) public / third party
   d) refrigerated
   e) distribution
   f) grocery
   g) manufacturing
   h) retail
   i) health services
3. Describe the proper procedures necessary for profitable warehouse operation and procedures that can result in unprofitable operation.
   a) profitable practices
   b) unprofitable practices

B. Basic Warehouse Functions.....10 Hours

Competency: Describe warehouse activities and their implication to the enterprise.

1. Describe activities that are common in warehouse operations and their interrelationships.
   a) shipping
   b) receiving
   c) storage
   d) material handling and transportation
   e) counting and record verification
2. Identify the costs that are related to the operation of a warehouse.
   a) manpower
   b) equipment
   c) holding inventory
   d) shrinkage
   e) direct and indirect expenses
   f) overhead

C. Job Skills ..... **10 Hours**

Competency: Describe the skills required in a warehouse.

1. Describe the basic skills and why they are required to effectively work in a warehouse operation.
   a) physical materials handling
   b) interpreting documentation
   c) safe work habits
   d) comprehension skills
   e) organizational skills
   f) interpersonal and communication skills
   g) accuracy and attention to detail
   h) basic computer skills
   i) customer relations
   j) other
2. Describe the personal benefits and importance of a professional development program.
3. List and evaluate the various professional development opportunities available.
   a) networking
   b) professional associations
   c) education opportunities

D. Warehouse Technology ..... **3 Hours**

Competency: Describe current and emerging warehouse technology.

1. Give an overview and describe the broad implications of current and emerging technologies into warehousing operations e.g.
   a) bar codes
   b) carousels
   c) RF systems
   d) pick to light.
4. List precautions, preparations specific to new warehousing technologies, such as
   a) importance of keeping bar codes legible.
   b) limitations of data base systems (GIGO).

E. Related Operations ..... **2 Hours**

Competency: Describe the relationship of the warehouse to other divisions of the enterprise.

1. Describe the relationship and interdependence of warehousing operations to other internal or external departments.
   a) purchasing
   b) sales/marketing
   c) transportation
   d) maintenance
   e) manufacturing and production
   f) accounting
2. Describe the related operations that warehouse industry personnel may need to perform.

SECTION TWO ..... COMMUNICATION AND COMPREHENSION SKILLS ..... 30 HOURS

A. Verbal Communications ..... 10 Hours

Competency: Apply verbal communication skills.

1. Identify and use verbal communication skills to reduce barriers during verbal communication.
   a) effective verbal communication
   b) communication process
   c) direction of communication flow
   d) barriers to effective verbal communication
   e) effect of language and intonation
   f) relationship of verbal communication skills to effective customer relations
2. Identify and use effective listening skills to improve the effectiveness of listening techniques, follow through on verbal and written orders and instruction.
   a) active listening skills
   b) barriers to effective listening
   c) contrast of listening to hearing
   d) effect of listening skills on customer reactions

B. Written Communications ..... 10 Hours

Competency: Apply written communication skills.

1. Organize and assemble written information.
   a) describe the commonly used methods of sending and receiving written communications. e.g. external mail, internal mail, fax, edit, e-mail
   b) when and why to use written communication
   c) importance of clarity and conciseness
2. Importance of good written communication skills to customer impression and reaction.
3. Identify when and why a specific form of written communication is used, complete a written form, reply to written requests using appropriate medium.
   a) letters
   b) memos
   c) reports
   d) pre-printed document forms (claims, surveys, etc.)
   e) email – FAX etc.

C. Warehouse Calculations and Measurements ..... 10 Hours

Competency: Perform warehouse calculations, measurement and conversions.

1. Identify and apply the appropriate measurements and units for warehouse operations.
   a) imperial units
   b) metric units
   c) industry specific units e.g.: barrels, cwt
2. Use common mathematical procedures applicable to warehousing.
   a) basic procedures (fractions, decimals, percentages)
   b) find area
   c) find volume

3. Conversion of measuring system units.
   a) imperial to metric
   b) metric to imperial

SECTION THREE..... WAREHOUSE SAFETY SKILLS ..... 30 HOURS

A. Basic First Aid / CPR .....10 Hours

Competency: Apply basic first aid.

1. St.John's ambulance emergency first aid and basic rescuer CPR Emergency scene management and various first aid skills including CPR.
2. Assess and respond to an injury accident at the workplace until professional help arrives.

B. Occupational Health and Safety / Due diligence.....1 Hour

Competency: Maintain a safe work environment.

1. Describe the application of OHS regulations to warehousing practices as they apply to workers, employers, suppliers, and equipment.
2. Describe and understand the application and legal implications of 'due diligence' for employers, employees, and prime contractors.
3. Practice the principles of 'due diligence' and its role for directing safe work practices in the warehouse operations

C. Transportation of Dangerous Goods .....1 Hour

Competency: Apply regulations and procedure for the transporting of dangerous goods.

1. Describe and employ all applicable regulatory requirements for the transportation of dangerous goods including proper classification, packaging, documenting, and the safe handling of shipments of dangerous goods.
2. *Transportation of Dangerous Goods Act*
3. International Air Transport Association Regulations
4. Loading and unloading of railcars

D. Personal Safety Procedures and Equipment .....3 Hours

Competency: Apply applicable procedures from WHMIS and personal protective equipment and clothing,

1. Apply WHMIS information and procedures within the warehouse operation including:
   a) appropriate labeling of materials
   b) proper handling procedures
   c) spill recovery information
   d) first aid information available
   e) restricted and controlled products
   f) supplier and workplace labels
   g) classification and safe handling of materials
   h) material safety data sheets.

2. Select, use and care for appropriate personal protection equipment for warehousing applications.
   a) hand and footwear
   b) head and eye protection
   c) respiratory protection
   d) hearing protection
   e) various types of protective clothing

E. Safe Lifting Carrying and Repetitive Strain Injury Control.....3 Hours

Competency: Apply safe material handling procedure.

1. Ergonomics, manual handling and movement of material—analyze and implement proper ergonomic practices while working.
2. Demonstrate safe lifting and carrying practices while manually moving materials.
3. Identify and correct possible repetitive strain injury situations.
   a) back care while lifting and carrying
   b) repetitive stress activities and injuries
   c) compare cost of ergonomically correct equipment to cost of repetitive stress injury (RSI)
   d) activity analysis for improved ergonomics

F. Environmental Protection .....3 Hours

Competency: Practice applicable environmental protection and recycling of waste materials.

1. Identify and describe the importance of using environmentally sound practices and procedures when warehousing materials.
2. Understand the compliance requirements of AEPA and hazardous waste regulations.
3. EPA (Alberta Environmental Protection Act) regulations and requirements.
4. Hazardous waste management procedures.
5. Spill containment and remedial materials and procedures.
6. Environmental issues and use of environmentally friendly materials in the warehouse.
7. Recycling in the warehouse

G. Emergency Response Procedures .....2 Hours

Competency: Be able to take appropriate action in case of fire or other emergency.

1. Describe and understand the proper and safe procedures when dealing with an emergency response situation such as fire or facility evacuation.
   a) fire safety
   b) evacuation
   c) emergency response policy
   d) internal and external (911, fire department) emergency response teams

H. Hazard Identification and Control Procedures.....2 Hours

Competency: Participate in joint safety initiatives.

1. Describe the operation, goals and objectives, and value of a joint safety committee.
   a) hazard identification
   b) recommendation of work site improvements
   c) interaction between management and workers
2. Identify the goals of and demonstrate the proper procedure to implement safety inspections and safety meetings.
3. Identify the goals and strategies for effective incident and hazard investigation.
4. Demonstrate the fundamentals of workplace hazard assessment and control procedures to reduce or eliminate hazard.
   a) identify hazards
   b) minimize or remove hazards through engineering and/or establishment of safe operating procedures

SECTION FOUR.....BASIC MATERIAL HANDLING OPERATIONS AND PROCEDURES..... 30 HOURS

A. Receiving.....5 Hours

Competency: Receive and document incoming material.

1. Receiving documents describe the function of receiving and the documentation related to receiving. Describe the importance of receiving within a warehouse operation in both time and economic impact.
   a) waybills (probills)
   b) packing slips
   c) purchase orders
   d) dangerous goods manifest
   e) M.S.D.S.
   f) discrepancy (over/short/damage) reports
2. Process shipments of goods properly, verify materials, demonstrate proper procedure for handling discrepancies.
   a) confirmation of shipment on waybills
   b) reading and verifying packing slips
   c) proper Purchase order information
   d) unpacking and sorting procedures
   e) inspection for internal and external damage
   f) reporting and recording of damage and irregularities
   g) staging of project materials
3. Describe the importance of paying attention to detail for receiving procedure

B. Stocking.....5 Hours

Competency: Distribute or stock incoming material properly.

1. Determine and apply stocking procedure to items within your operation.
   a) identify commodity groups
   b) stock locating systems (random, fixed, etc.)
   c) determining stock versus special order items
   d) stock identification systems (label, internal numbering systems, barcode, etc.)
   e) stock cataloguing methods
2. Describe the importance of proper stock identification and locating of stock.

C. Storing ..... 5 Hours

Competency: Store materials properly

1. Describe the procedures for proper storage.
2. List the benefits of proper storage.
   a) storage techniques considering product life, risk of damage, hazards, and other determining characteristics
   b) storage considerations regarding size and weight
   c) considerations in relation to whether materials stored are raw material, work in process, or finished product
   d) overview of storage systems as related to product characteristics
   e) importance of product compatibility when storing
3. Identify the cost and potential hazards of improper storage.
4. Describe in general terms common types of storage systems within the warehouse.

D. Order Generation and Picking ..... 2 Hours

Competency: Fill orders from stock properly.

1. Explain the "order cycle"—understand the sequence of events in the order cycle and the importance of proper order generation, authorization and documentation.
2. Order generation
   a) types of orders (emergency, scheduled, stocking, etc.)
   b) order authorization
   c) sources of orders (internal, external)
3. Proper picking procedures
   a) based on product characteristics
   b) based on order priority
   c) based on location sequence
   d) relationship to traffic scheduling
4. Introduction to proper order staging
   a) define staging and its function
   b) basic guidelines of effective staging procedures
5. Describe various picking strategies and the impact they can have on warehouse operations.
6. Describe the importance of effective picking as regards to type and location of materials.
7. Describe the need and value of properly staging an order.
8. Understand the procedures to properly stage an order.

E. Issuing and Product Allocation ..... 2 Hours

Competency: Issue and/or allocate products properly.

1. Issue parts, materials, and equipment properly and effectively.
   a) overview of issuing areas and environment
   b) different types of issuing requests (personal/counter, on-line computer, issuing ticket, work orders)
   c) results of proper and improper issuing practices.
2. Product allocation
   a) reasons and rationale for product allocation
   b) locating and/or segregating allocated items
   c) tracking of allocated stock and locations

3. Explain the need of maintaining an accurate accounting for issued items.
4. Identify and eliminate practices that can lead to shortages and missing items.
5. Explain the role of allocated materials in a facility and their relationship with warehouse operations.
6. Track and account for allocated stock

F. Packing and Shipping ..... 5 Hours

Competency: Process and document shipments properly.

1. Select and use the appropriate packing materials and procedures for shipment of product packaging materials to ensure shipments will not be damaged because of improper packaging.
2. Identify product characteristics that would require special packing techniques.
   a) types of packages (crates, cartons, sleeves, etc)
   b) types of fastening materials (Strapping, tape, etc)
   c) types of filler material (foam, bubble pack, etc)
   d) packaging for material characteristics (weight, shape, special handling, etc)
   e) proper packing techniques to prevent damage of material during transport
   f) packing material required by regulations (TDG, WHMIS etc.)
3. Determine the appropriate method of shipping.
   a) introduction to modes of transportation
   b) factors in determining which mode to select
   c) proper documentation of shipment (WHMIS, TDG, etc)
   d) introduction to shipping charges (distance/weight, cube, rated as, etc)
4. Discuss the possible methods of shipping, identifying the factors that would determine selection of shipping method.
5. Process shipping documents and applicable charges.

G. Stock Maintenance ..... 2 Hours

Competency: Maintain stock properly.

1. Understand the importance of maintaining inventoried and stocked items regarding quality and quantity.
2. Apply procedures that will improve the condition of stocked items in both quantity and quality.
   a) describe stock outs
   b) record stock outs
   c) reasons for relocating stock
   d) proper follow up procedures that are necessary with relocated stock
   e) importance of repackaging product with damaged or deteriorated packaging
   f) introduction to max and min levels
   g) reasons for and proper handling of obsolete items
   h) techniques for fixing discrepancies in stock levels
   i) stock rotation
   j) obsolescence and seasonality
3. Discuss the cost of having items missing or in unusable condition, and describe methods of prevention.

H. Product Returns.....2 Hours

Competency: Process returned items properly.

1. Accept returned product in an efficient and accurate manner.
2. Describe the impact of returned goods to both the customer and the employer.
3. Implement procedures to handle the returned goods.
   a) document and inspect returned item
   b) cost and related charges incurred with a returned items
4. Discuss impact of product returns on inventory and proper handling of inventory stock levels and inventory control system.
5. Importance of proper handling of returns (customer satisfaction, economic impact, inventory accuracy)

I. Introductory Physical Inventory.....2 Hours

Competency: Describe procedure for maintaining inventory control.

1. Describe the importance of properly maintained physical Inventory procedures - accurate inventory records.
2. List various methods of counting stock and describe the advantages and disadvantages of these methods.
   a) types of physical inventory (complete, cycle count
   b) purpose and reasons for inventory count
   c) benefits of inventory count
3. Preparations and actual count procedures.
   a) proper preparations to ensure accuracy
   b) counting techniques to ensure accuracy
   c) reconciliation of count to inventory records
   d) probable cause of errors and how to correct
4. Implement work habits that will ensure accurate inventory counts.
5. Identify and correct common errors in inventory counts.

SECTION FIVE.....MATERIAL HANDLING AND PACKAGING EQUIPMENT ..... 30 HOURS

A. Introduction.....2 Hours

Competency: Describe material handling and packaging equipment.

1. Identify various types of material handling and packaging equipment.
2. Evaluate and choose handling and packaging equipment to provide for the best handling of materials.
   a) variety of equipment and materials
   b) application of equipment and materials
   c) handling categories—piece, package, bulk
3. Evolution of material handling and packaging.
   a) equipment
   b) industry trends
   c) changes in technology
   d) ongoing developments
4. Assess and evaluate new technological changes as they become available to industry.

B. Small Tools.....2 Hours

Competency: Select and use appropriate tools for package handling.

1. Use hand packaging tools. Choose appropriate tools best suited for handling and packaging goods.
   a) cutting tools
   b) sealing tools
   c) binding tools
2. Use hand materials handling tools.
   a) gripping tools
   b) dispensing tools
   c) measuring tools
   d) labeling and marking tools

C. Non-powered Wheeled Material Handling Equipment.....2 Hours

Competency: Select and use appropriate non-powered material handling equipment.

1. Identify different types of non-powered wheeled equipment and appropriate safe usage and application.
   a) Dollies
      i. types available
      ii. applications
   b) Two Wheel Hand Trucks
      i. types available
      ii. applications
   c) Carts
      i. types available
      ii. applications
   d) Pallet Jacks
      i. types available
      ii. applications

D. Counterbalance Forklift Trucks.....12 Hours

Competency: Be able to operate counterbalance forklift truck safely.

1. Identify the different types of counterbalance forklift trucks, areas of specialization, and appropriate safe use and application.
   a) indoor trucks
   b) outdoor trucks
2. Forklift Features and Applications
   a) design principles and capacities
   b) types of fuel
   c) types of tires
   d) specialized applications
   e) accessories available
3. Safe operation and use of Forklift Trucks
   a) new features available on forklift trucks
   b) describe recent developments and changes in technology.

E. Narrow Aisle Forklifts.....6 Hours

Competency: Be able to operate a narrow aisle forklift truck safely.

1. Describe different types of narrow aisle forklift trucks, areas of specialization, and appropriate safe use and application.
   a) straddle trucks
   b) reach trucks
   c) order pickers
   d) swing reach & swing mast trucks
   e) turret trucks
2. Forklift Features and Applications
   a) design principles and capacities
   b) drives and guidance systems
   c) specialized applications
   d) integrated systems
   e) accessories available
3. Safe operation and use of Narrow Aisle Forklift Trucks.
4. New Features Available on Narrow Aisle Forklift Trucks.
5. Describe recent developments and changes in technology.

F. Cranes.....2 Hours

Competency: Be able to use crane and apply proper rigging procedure.

1. Identify select and safely use crane equipment and attachments.
   a) manual
   b) automated
   c) stacker
2. Determine the various crane configurations.
   a) overhead
   b) ground level
   c) ASRS
   d) jib
   e) gantry
3. Proper selection of crane systems and accessories.
   a) selection criteria (ratings)
   b) design considerations
   c) slings and rigging equipment

G. Conveyors .....2 Hours

Competency: Use conveyors properly.

1. Identify select and safely use conveyor equipment and attachments.
   a) powered
   b) non-powered
2. Determine various conveyor configurations.
   a) belt
   b) roller
   c) wheel

3. Select conveyor systems and accessories.
   a) selection criteria (ratings)
   b) design considerations
   c) drive systems
   d) control systems
   e) accessories

H. Packaging Materials ..... 2 Hours

Competency: Select and use packaging materials.

1. Identify and properly use the various types of packaging material.
   a) overview of materials available
2. Function and design of packaging materials.
   a) grouping
   b) containment
   c) protection
   d) identification
3. Safe use of packaging materials.
   a) proper application of materials
   b) function of materials
   c) proper selection according to materials being packaged

SECTION SIX ..... COMPUTERS IN WAREHOUSING ..... 30 HOURS

A. Warehouse Information Technology ..... 6 Hours

The Occupation Committee's recommended entrance standard is a high school diploma. High school graduates have learned basic computer literacy skills as part of their education for some time. A trainee who is not computer literate will need to acquire basic computer literacy skills before taking this unit.

1. Describe the computer systems and software used for Warehousing.
   a) LAN
   b) WAN
   c) intranets – extranets
   d) internet
   e) wireless networking
   f) database structures
   g) proprietary nature of databases
2. Describe the need for maintaining accurate entries in a database system.

B. Computer User Ethics and Computer Security ..... 24 Hours

Competency: Enterprise computers appropriate to work activity.

1. Describe user responsibilities and ethical responsibilities of using of employer provided computers and computer systems.
2. Describe the appropriate use of the Internet at work.
3. Responsibilities of employers, employees, and organizations in regards to copyrighted or inappropriate, illicit or offensive materials in the workplace or on computers (e.g. laptops) or data connections that belong to the organization.
4. Describe the legal and civil consequences of obtaining (downloading) and storing illegal materials on a computer.

5. Describe the appropriate use of employer assigned email accounts.
6. Describe the need for email etiquette, courtesy, appropriate and timely response.
7. Give examples of inappropriate use of email on the job.
   a) forwarding warning messages.
   b) inappropriate use of address books groups
   c) flaming
8. Describe potential consequences of sending controversial, defamatory, slanderous or offensive material by email.
9. Describe the need for computer security.
   a) purpose and need for passwords
   b) need to protect confidential or proprietary data on company computer systems
   c) dangers of installing or downloading software that may contain viruses or other software that can compromise a computer system
10. Describe monitoring software, and how it can track employee computer activities.
11. Describe typical employer IT (Information Technology) policies for employees who use computers, and possible consequences of employee violation of employer IT policy.

SECTION SEVEN..... MATERIAL STORAGE AND STORAGE SYSTEMS ..... 30 HOURS

A. Storage Facilities Overview ..... 10 Hours

Competency: Describe considerations for storage appropriate to the product being stored.

1. Describe the importance of proper storage planning based on the characteristics of the product.
2. Describe special regulations, specifications, or procedures and how they would impact on the storage of particular products.
3. Determine, plan and implement storage appropriate to the characteristics of the product stored.
   a) bulk materials (fluids, powders, solids, etc)
   b) palletized materials
   c) carton (case lot) materials
   d) small items
   e) perishables
   f) refrigerated
   g) quarantine
   h) hazardous materials
   i) work in process
   j) finished product
   k) raw materials
   l) bond / security

B. Manual Storage Systems ..... 10 Hours

Competency: Choose appropriate storage for product/items.

1. Identify and properly select appropriate storage systems.
2. Choose the proper storage systems based on type of material being stored.
3. Describe system design limits, and space limits.
4. Recognize the limitations and appropriate use of storage systems.
   a) types of racking (pallet, cantilever, drum, etc)

b) types of shelving (small item, display, etc)
c) mezzanines
d) common dimensions of storage systems
e) weight capacity of storage systems
f) clear space required for storage systems (aisles, ceiling, etc)
g) bulk
h) bulk pallet

C Automated Storage Systems ..... 10 Hours

Competency: Operate automated storage systems.

1. Identify and select the appropriate automated storage system. Identify and select automated storage systems for appropriate material storage and handling.
   a) conveyors
   b) bins and carousels
   c) S/RS (automated storage and retrieval systems)
   d) AGV (automated guided vehicles)
2. List the advantages and limitations that automated storage systems with respect to product through-put, product characteristics, and economic impact.

INTERMEDIATE LEVEL TECHNICAL TRAINING

WAREHOUSING OCCUPATION
COMPETENCY PROFILE

SECTION ONE ..... TRANSPORTATION AND TRAFFIC ..... 30 HOURS

A Introductory Transportation and Traffic ..... 6 Hours

Outcome: ***Describe and compare transportation methods.***

1. List and describe common transportation methods used to transport materials.
   a) rail
   b) marine
   c) road
   d) air
   e) pipeline
   f) intermodal
   g) private fleet
   h) other
2. Compare costs and limitations involved with various modes of transportation.
   a) geographical limitations
   b) physical characteristics of materials
   c) packaging specifications and requirements
   d) routing options
   e) hazardous materials
   f) other
3. Compare advantages and disadvantages of modes of transportation.

B. Transportation Costs..... 8 Hours

Outcome: ***Choose and process transportation.***

1. Understand the costs involved with various forms of transportation and calculate the correct transportation costs.
   a) less than truck load
   b) truck load
   c) containers
   d) rail
   e) courier
   f) customs brokers
   g) freight consolidation
   h) demurrage
   i) storage
   j) pool car
   k) freight forwarder
   l) other
2. Proper usage of transportation documents.
3. Identify and use forms common to the transportation of goods.
   a) way bill (pro bill)
   b) bill of lading
   c) customs documentation
   d) contracted rates

e) claims
f) transportation of Dangerous Goods
g) other

C. Traffic Management ..... 8 Hours

Outcome: ***Describe traffic management.***

1. Traffic operations—describe the functions of the traffic department.
   a) equipment selection
   b) commodity and freight scheduling
   c) transportation mode selection
   d) freight rate negotiation and audit
   e) claims prevention
   f) special services (expediting, tracing)
   g) other
2. Advantages of traffic management—identify the advantages obtained by a properly managed traffic department.
   a) economic
   b) quality and damage control
   c) reduction of material transit time
   d) other

D. Introduction to Customs and Import/Export ..... 8 Hours

Outcome: ***Describe the import/export process.***

1. Overview of Customs regulations.
2. Describe the goals and basic structure of customs regulations.
   a) country of origin
   b) NAFTA
   c) tariffs / duty
   d) permits
   e) coding system
   f) other
3. Types of documents and common practices used for customs and import/export—identify the proper use of various forms and practices related to the importing or exporting of materials.
   a) coding
   b) valuation
   c) EDI
   d) customs brokers
   e) other

SECTION TWO .....INTERMEDIATE MATERIAL HANDLING OPERATIONS AND PROCEDURES ..... 30 HOURS

A Receiving ..... 5 Hours

Outcome: ***Describe the importance of proper receiving procedure.***

1. Understand the importance of receiving within a warehouse operation as it relates to purchasing and vendor rating procedures as it relates to:
   a) purchasing
   b) accounts payable

c) customer service
d) inventory management
e) general ledger
f) loss/damage claims
g) production planning and scheduling.

2. Describe how receiving impacts on effective inventory control.
3. Describe how receiving plays a role in obtaining discounts though timely receiving and processing to accounts payable.
4. Describe the importance of receiving in relationship to production planning and scheduling.
5. Describe the importance of proper receiving as related to customer service.
6. Describe loss/damage claims.

B. Stocking and Storing.....5 Hours

Outcome: ***Describe the importance of proper stocking and storage procedures.***

1. Recognize the importance of stocking and storage procedures.
   a) costs related to effective use of space
   b) costs related to proper stock locating systems
   c) importance of determining stock versus special order items from a customer service viewpoint
   d) basic stock cataloguing methods
   e) costs related to stock rotation, shelf life, and special product characteristics
2. Recognize the importance of proper stock identification and accurate dependable stock locator systems.
3. Be aware of various storage systems available and how to properly use to prevent loss.
4. Understand the financial and efficiency impact of proper and improper stocking techniques.

C. Order Preparation and Processing .....5 Hours

Outcome: ***Describe the importance of efficient order processing.***

1. Economic impact of the Order Cycle. Describe stock pick systems and how it impacts on warehouse operations of order selection.
2. Economic impact and considerations. Describe the relationship between stock picking and delivery scheduling.
   a) destination
   b) commodity groups
   c) location sequence
   d) order date
3. Order preparation. Describe the need and impact of proper order staging.
   a) stock selection
   b) back orders
4. Product allocation and reservations. Understand how product allocation / reservation effects inventory levels and customer service.

D. Packaging, Packing, and Containerization ..... 5 Hours

Outcome: ***Describe packaging consideration for product transportation to destination.***

1. Proper use cost effectiveness of packing materials and procedures for shipment of product.
2. Select and use the appropriate materials to ensure cost effective shipments that will not be damaged.
3. Describe the properties of packaging and packing materials.
   a) types of packages (crates, cartons, sleeves, etc)
   b) types of fastening materials (strapping, tape, etc)
   c) types of filler material (foam, bubble pack, etc)
   d) packaging for material characteristics (weight, shape, special handling, etc)
   e) proper packing techniques to prevent damage of material during transport (silica gel, volatile corrosion inhibitors, barrier materials, cushioning)
4. Containerization materials and related costs. Describe how containerization is used to reduce handling and shipping costs, loss and damage.
   a) sea vans
   b) cartons
   c) shrink wrap
   d) pallets

E. Inventory Maintenance ..... 5 Hours

Outcome: ***Describe procedure for maintaining accurate inventory.***

1. Understand and apply procedures that will improve the accuracy of stock control records Understand the impact and importance of inventory counts.
   a) cycle counts
   b) annual physical counts
2. Understand the difference between annual and cycle counts and the rationale and benefits for each. Proper preparation for stock counts.
   a) documentation
   b) transaction cut offs
3. Identifying dead/obsolete stock.
4. Understand how to manage surplus, slow moving, and obsolete stock.
5. Proper control of inventory transactions.
   a) during cycle/physical counts
   b) inventory adjustments
   c) count finalization
   d) ongoing accuracy

F Shipping and Product Returns ..... 5 Hours

Outcome: ***Describe importance of proper shipping procedure.***

1. Understand the implications of improper documentation and preparation of materials for shipment. The proper handling procedure of products returned to suppliers.
   a) cost of potential loss and damage
   b) insurance and liability
   c) corporate policy
   d) established procedures

e) inventory accounting adjustments
f) general ledger adjustments

2. Prepare for shipment.

3. Document materials for shipment.
   a) bills of lading
   b) waybill
   c) hazardous goods manifest
   d) contracts / agreements

4. Understand appropriate policy and procedures on returned goods The proper handling procedure of returned products from customers.
   a) corporate policy
   b) established procedures
   c) inventory accounting adjustments
   d) general ledger adjustments

SECTION THREE.....MATERIAL IDENTIFICATION..... 30 HOURS

A. Introduction to Material Identification.....10 Hours

Outcome: ***Describe material identification.***

1. Describe the importance and value of a properly chosen materials identification system.
2. Identify when and why a specific system is best suited for a specific warehouse operation.
3. Describe the importance of an effective back-up system. Describe advantages and disadvantages of choosing a specific materials identification system.
4. Evaluating and choosing an effective back-up system.

B. Physical Material Identification .....8 Hours

Outcome: ***Describe material identification tools and procedures.***

1. Describe physical methods of material identification. Types of physical material identification tools.
   a) labels
   b) nameplates
   c) engraving
   d) stencils
   e) marking pens
   f) tags
   g) other
2. Advantages and limitations of material identification tools. Identify limitations and appropriate use of various forms of physical identification tools.
   a) type of storage
   b) quantity of material
   c) storage environment
   d) durability of identification

C. Electronic Material Identification ..... 6 Hours

Outcome: ***Describe electronic material identification.***

1. Describe electronic methods of material identification and the types of electronic material identification tools.
   a) bar code technology
   b) scanner technology
   c) computer identification systems
   d) microchip technology
   e) other
2. Advantages and limitations of electronic material identification tools—identify the limitations and appropriate use of various forms of electronic identification tools.
   a) type of storage
   b) quantity of material
   c) storage environment
   d) durability of identification

D. Material Identification Records ..... 6 Hours

Outcome: ***Describe material identification records.***

1. Types of material identification records—describe methods of recording material identification information.
   a) cataloguing
   b) microfiche/microfilm
   c) computer files
   d) capital equipment tracking systems
   e) other
2. Advantages and limitations of material identification record systems—identify limitations and appropriate use of various forms of material records.
   a) cost
   b) capacity
   c) timeliness
   d) revision capabilities

SECTION FOUR ..... QUALITY CUSTOMER SERVICE ..... 30 HOURS

A. Introduction ..... 6 Hours

Outcome: ***Describe internal and external customer.***

1. Identify and profile types of internal customers. Identify internal customers and define their specific expectations and needs filled by warehousing industry personnel.
   a) management
   b) accounting
   c) sales
   d) marketing
   e) production operations
   f) other branches
   g) user departments - internal stakeholders
2. Identify and profile types of external customers. Explain why different internal and external customers have different specific needs and the importance of properly identifying that specific need.
   a) retail customers

b) wholesale customers
c) government agencies (customs etc.)
d) transportation companies
e) suppliers

3. Define the core elements of customer service when considering all of the above specific needs.

B Measuring Customer Service Satisfaction ..... 8 Hours

Outcome: Monitor customer satisfaction.

1. Identify the relationship of customer service to marketing strategies, company policies, and goals. Describe the importance of creating loyal customers for your business. Establish a customer service strategy for products or services.
2. Identify methods of measuring customer service.
   a) industry specific measurements
   b) inventory measurements
   c) backorder rate
   d) fill rate
   e) stock outs
   f) returns
   g) accuracy
   h) throughput measurements
   i) customer surveys and evaluations
   j) turnover
3. Describe the process of bench marking to make valid performance comparisons.
4. Apply benchmarking to evaluate customer service.
5. Describe and apply qualitative and quantitative customer service measurements.
6. Select the customer service measurement best suited to their specific expectations and needs.

C Customer Service Goals and Improvements ..... 8 Hours

Outcome: Achieve goals for customer service.

1. Identify specific goals of customer service.
   a) customer retention
   b) customer satisfaction
   c) customer increase
   d) reduced damage
   e) improved teamwork
2. Identify different approaches used to implement quality customer service.
   a) retail customers
   b) wholesale customers
   c) internal customers
   d) distribution customers
   e) personal contact service customers
   f) electronic contact service customers (telephone, fax, EDI)
3. Identify the costs of retaining customers and the costs involved in gaining new customers.
4. Describe different types of customer behaviour.
5. Identify customer service goals in relationship to specific benefits.
6. Identify and select the best way to approach customer service improvement based on type of customer.

7. Describe the importance of rewarding service excellence.

D. Effective Customer Interaction ..... 8 Hours

Outcome: ***Handle difficult situations with customers.***

1. Identify techniques that will improve effective customer interaction during difficult customer situations.
   a) angry customers
   b) impatient customers
   c) indecisive customers
   d) other
2. Apply techniques for recovery of lost customers.
3. Identify challenging customer service situations. Provide quality customer service for these situations.
4. Communicate effectively with customers using appropriate listening, and interpersonal skills.
5. Apply effective and appropriate action to customer complaints.

SECTION FIVE ..... FUNDAMENTALS OF WAREHOUSE BUSINESS OPERATIONS ..... 30 HOURS

A. Introduction ..... 4 Hours

Outcome: ***Describe warehouse business procedures.***

1. Describe common business procedures used by the warehousing industry.
   a) budgeting
   b) performance measurement
   c) cost/value analysis
   d) auditing
   e) cost control
   f) revenue and expense identification
   g) other
2. Describe business relationships and roles between various internal and external business segments related to the warehouse.
   a) production
   b) marketing / sales
   c) purchasing
   d) traffic
   e) external auditors
   f) other

B. Business Operation Measurements ..... 14 Hours

Outcome: ***Analyse warehouse costs.***

1. Identify the financial implications of a warehouse.
   a) operating costs
   b) human resource allocation (labour costs)
   c) opportunity costs
   d) inventory costs
   e) shrinkage
   f) expenses
   g) depreciation

h) capital costs
i) asset recovery (salvage etc)
j) financing costs
k) other

2. Describe and use common financial measurements used to evaluate warehousing business operations.
   a) cost/benefit analysis
   b) depreciation calculations
   c) return on investment calculations
   d) other

3. Describe and use effective audit trails

C. Activity Measurements.....12 Hours

Outcome: ***Analyze warehouse activity.***

1. Identify and use activity measurements used in the warehousing industry.
   a) SKU measurements
   b) order measurements
   c) shipping measurements
   d) receiving measurements
   e) throughput measurements
   f) labour measurements
   g) turnover
   h) other

SECTION SIX .....INDUSTRY SPECIFIC TRAINING ..... 30 HOURS

A. Independent or Industry Specific Learning Activities ..... 30 hours equivalent

Outcome: ***Choose warehouse learning activity appropriate to own situation.***

1. Select and apply independent learning activities, site, sector or employer training program for Warehousing—one or more programs, to equivalent of 40 classroom hours. e.g.
   a) site specific training
   b) material specific training
   c) vendor seminars and training
   d) a combination of short in house training sessions
   e) safety training not covered in the Warehousing program

TECHNICIAN TECHNICAL TRAINING

WAREHOUSING OCCUPATION
COMPETENCY PROFILE

SECTION ONE ..... FUNDAMENTALS OF WAREHOUSE BUSINESS MANAGEMENT ..... 30 HOURS

A. Operational Objectives ..... 6 Hours

Outcome: ***Manage day-to-day warehouse activity.***

1. Give overview and describe the benefits of sound business management.
2. Manage a warehouse using operational objectives.
   a) physical requirements
   b) time span
   a) frame of reference
   b) using models or examples
3. Apply elements of cost control.
   a) warehouse costing
   b) warehouse cost elements
   c) operating budgeting
   d) strategic budgeting

B. Strategic Planning and Operational Decision Implementation ..... 6 Hours

Outcome: ***Develop long range plan for warehouse.***

1. Discuss importance of strategic planning and relationship to tactical planning.
2. Describe strategic planning process.
   a) corporate vision, goals and objectives
   b) interface of warehouse with other work units, i.e. marketing, operations
   c) customer service
3. Develop a strategic plan.
   d) warehouse management systems
   e) equipment and human resources
4. Implement operational decisions.
   a) warehouse process
   b) space layout
   c) stock location system
   d) handling and storage equipment
   e) stock location
   f) inventory control
5. Maximize warehouse production.
   a) ABC analysis
   b) space utilization

C. Goal Setting and Time Management ..... 6 Hours

Outcome: ***Set performance goals for warehouse.***

1. Describe importance and rationale for establishing goals.
2. Describe and use performance measures.
   a) qualitative
   b) quantitative
   c) prioritizing work
3. Apply production management.
   a) performance standards
   b) achieve maximum productivity
   c) evaluate productivity
4. Apply time standards

D. Management Styles and Decision Making Techniques ..... 6 Hours

Outcome: ***Choose and use an appropriate decision making style.***

1. Give overview of philosophies underlying management techniques including:
   a) TQM
   b) free reign
   c) self directed work teams
   d) coaching and mentoring
   e) flexible
2. Give overview of work process techniques, list advantages, and disadvantages.
   a) rotation
   b) integrated
   c) stand alone
3. Apply decision making techniques
   a) AIM
   b) factors
   c) course of action analysis
   d) decision implementation

E. Ethical Considerations in Warehousing ..... 6 Hours

Outcome: ***Apply ethical behaviour in warehouse management.***

1. Describe importance of ethics, public image, corporate goals and objectives, professionalism.
2. Be aware and take into consideration:
   a) policies and procedures
   b) no such thing as a free lunch
   c) quality management
   d) "gratuitous" gifts
   e) "back dooring"

SECTION TWO ..... FUNDAMENTALS OF PURCHASING PROCEDURES ..... 30 HOURS

A. Scope of Purchasing ..... 5 Hours

Outcome: ***Describe full scope of purchasing.***

1. Define the operations included in purchasing materials or services.
2. Describe the skills required to effectively purchase materials or services.
3. Describe the basic practices involved in purchasing materials or services.

B. Purchasing Systems ..... 10 Hours

Outcome: ***Choose and use appropriate purchasing process.***

1. Use Purchase Orders:
   a) identify types of purchase orders (blank, release, standing, etc.)
   b) describe when to use purchase orders
   c) list terms and conditions common to purchase orders
2. Describe purchasing systems.
   a) manual systems
   b) computerized systems
   c) E.D.I. systems
   d) fax

C. Purchasing Ethical and Legal Principles ..... 5 Hours

Outcome: ***Apply ethical behaviour for purchasing.***

1. Describe the legal and ethical guidelines that govern purchasing.
2. Identify the elements of a legal contract.
3. Describe the obligations that both the buyer and the vendor have when entering into a transaction.

E. Purchasing Techniques ..... 10 Hours

Outcome: ***Choose and use the most appropriate and efficient method for purchasing.***

1. Use appropriate and effective purchasing analysis and decisions.
   a) competitive bidding analysis
   b) make or buy analysis
   c) cost/Value analysis
2. Describe the goals of and implementing supplier partnerships.
   a) implementing and maintaining quality objectives
   b) vendor certification techniques
3. Proper negotiation techniques.
4. Relationship of purchasing to provincial and federal regulations such as OHS, WCB, CSA, etc.

SECTION THREE..... FUNDAMENTALS OF INVENTORY CONTROL PROCEDURES ..... 30 HOURS

A. Overview of Inventory .....6 Hours

Outcome: ***Describe the full scope of inventory.***

1. Types of inventory.
   a) physical characteristics
   b) categories (finished product, spares, work in process, raw materials, capital)
2. Functions of inventory.
   a) fluctuation
   b) anticipation
   c) transportation
   d) cycle
3. Types of inventory control systems.
   a) manual
   b) electronic
4. Describe the scope of inventory and the factors that influence proper control procedures.
5. Describe the functions of inventory and their impact on warehouse operations.
6. Apply appropriate industry control systems.

B. Inventory Value, Costs, & Classification .....6 Hours

Outcome: ***Analyze inventory procurement and storage.***

1. Identify the various costs associated with inventory procurement and storage.
   a) acquisition
   b) possession
   c) stock outs (lost opportunity)
   d) warehousing costs
2. Identify and measure the impact of inventory on service operations to internal and external customers.
   a) level of service
   b) operating efficiency
   c) inventory turnover ratio
3. Classify an inventory and evaluate the results of classification.
   a) ABC classification
   b) Pareto's law
   c) usage value

C. Forecasting Techniques.....6 Hours

Outcome: ***Forecast demands on inventory.***

1. Apply a variety of effective use of forecasting techniques.
   a) qualitative factors
   b) quantitative factors
   c) causal techniques
2. Identify factors that will effect forecasting.
   a) demands
   b) trends

3. Discuss forecasting error control methods.
   a) moving averages
   b) exponential smoothing
   c) mean absolute deviation

D. Methods of Inventory Management.....6 Hours

Outcome: ***Choose and use an appropriate method for inventory.***

1. Discuss the following, describe and compare advantages and disadvantages.
   a) Economic Order Quantity (EOQ)
   b) Order Points and Safety Stock
   c) Fixed order Quantity
   d) Just In Time (JIT)
   e) Materials Requirements Planning (MRP)
   f) Manufacturing Resource Planning (MRPII)
   g) Distribution Requirements Planning (DRP)

E. Physical Inventory Procedures .....6 Hours

Outcome: ***Manage the physical inventory process.***

1. Describe when and why physical inventory procedures are necessary.
2. Describe importance of physical inventory related to
   a) error correction
   b) security issues
   c) management changes
   d) economic measurements.
3. Make required preparations for a physical inventory, including interaction with other departments.
4. Methods of taking physical inventory.
   a) cycle count
   b) partial or zone
   c) complete
5. Choose the most effective way of taking a physical inventory count.

SECTION FOUR.....FUNDAMENTALS OF WAREHOUSE DESIGN AND PLANNING ..... 30 HOURS

A. Introduction.....3 Hours

Outcome: ***Describe warehouse facility planning requirements.***

1. Describe the considerations used for planning and designing a warehouse.
   a) importance of proper site selection
   b) existing municipal infrastructure
   c) relationship of location to materials and customers
      i. Existing transportation infrastructure
   d) common building configurations
   e) safety aspects
2. Identify the codes and regulations that would apply to designing a warehouse

B. Traffic and Material Storage.....6 Hours

Outcome: ***Integrate storage and traffic efficiently.***

1. Describe requirements for planning and designing storage and traffic areas of the warehouse.
   a) rationalize storage space requirements (type of product)
   b) select effective traffic flow
   c) choose and plan for types of material handling equipment
   d) plan for operational functions (issuing, receiving, shipping, etc.)
   e) plan for the most economical and efficient method of storing materials.
   f) plan for most effective use of space (cubic density)
2. Describe the benefits and considerations for pre-planning traffic and storage requirements.
3. Plan for effective storage space and equipment when considering the type of material to be stored.
4. Identify how different types of material handling equipment will effect storage planning decisions.

C. Facility Equipment and Material Selection .....6 Hours

Outcome: ***Select all equipment and materials for warehouse.***

1. Evaluate and choose equipment and materials.
   a) safety equipment
   b) lighting
   c) staff amenities
   d) traffic control
   e) security
   f) heating and ventilation
   g) hazardous material requirements
   h) floor selection
   i) fire safety equipment
   j) other

D. Warehouse Design Project .....15 Hours

Outcome: ***Design and plan a warehouse.***

1. Design and plan a warehouse operation considering all the aspects of effective space usage including::
   a) storage selection
   b) equipment selection
   c) manpower planning
   d) throughput planning
   e) site selection
   f) traffic and safety considerations,

SECTION FIVE.....FUNDAMENTALS OF QUALITY MANAGEMENT..... 30 HOURS

A. Quality Management.....10 Hours

Outcome: ***Describe quality management.***

1. Give overview of philosophy, goals, and benefits of quality management.

2. Describe how to implement a quality management program.
3. Describe how quality management practices contribute to effective management.
   a) planning
   b) quality control
   c) performance improvement
   d) personnel organization
   e) motivation strategies
4. Describe management and quality teams/circles.
   a) rationale for implementation
   b) establishing goals
   c) measuring success
5. Manage, measure and evaluate a quality management system.

B. ISO standards ..... 10 Hours

Outcome: ***Fully describe how ISO standards apply to warehousing.***

1. Give overview and benefits of ISO certification. Describe the ISO certification categories and the goals and benefits of obtaining certification.
2. List procedure to get ISO certification, include audit procedures and preparation of a quality manual.
3. List requirements for maintaining ISO certification.

C. Putting Quality Into the Warehouse ..... 10 Hours

Outcome: ***Describe outside the enterprise standards.***

1. Describe relevant quality standards (CSA, CGSB).
2. Discuss impact of quality standards on warehouse operations.
   a) shipping materials
   b) receiving materials
   c) storing materials
   d) internal and external customer service
3. List relevant standards that effect warehouse operations
4. Apply quality programs to specific warehouse practices

SECTION SIX ..... FUNDAMENTALS OF WORKPLACE SUPERVISORY SKILLS ..... 30 HOURS

A. Worker Supervision ..... 9 Hours

Outcome: ***Practice appropriate supervision of workers and a safe work environment.***

1. Give overview of requirements for proper and effective worker supervision. Use skills that will enhance worker supervision.
   a) verbal communication
   b) written communication
   c) listening skills
   d) clarity when giving instructions
   e) inspection of work site
   f) "due diligence" for supervisors

2. List regulated requirements for supervisors—identify the requirements that various regulations place on supervisors.
   a) Workplace Hazardous Materials Information System
   b) Transportation of Dangerous Goods
   c) Occupational Health and Safety

B. Evaluation, Training and Supervision ..... 9 Hours

Outcome: ***Implement worker training and evaluation.***

1. Supervise training programs.
   a) set goals for training programs
   b) evaluate training needs
   c) follow up on training programs
2. Worker Evaluation Techniques.
   a) job descriptions or specifications
   b) job analysis
   c) performance appraisal methods
3. Evaluate and assess current training needs and implement a program to fill those needs.
4. Identify worker skill requirements and identify training or skill improvement needs.

C. Safety Program Supervision ..... 3 Hours

Outcome: ***Implement safety programs and training.***

1. Plan and implement effective safety committees and meetings.
2. Conduct safety inspections.
3. Conduct accident and incident investigations.
4. Use Workers Compensation Board and Occupational Health and Safety forms.
5. Prepare for and understand the goals of a safety audit.
6. Evaluate safety-training needs.

D. Recruitment and Worker Record Supervision ..... 3 Hours

Outcome: ***Manage hiring, worker records, and worker terminations.***

1. Organize and maintain worker records in an effective manner.
   a) time records
   b) training records
   c) safety records
2. Use a variety of techniques to recruit and evaluate potential workers.
   a) resumé review techniques
   b) individual interview techniques
   c) panel interview techniques
   d) skills pretesting

SECTION SEVEN.....INDUSTRY SPECIFIC TRAINING..... 30 HOURS

A. Independent or Industry Specific Learning Activities .....30 Hours

Outcome: ***Select appropriate warehouse management learning activity.***

1. Select and apply independent learning activities, site, sector, employer training programs applicable to Warehousing Technician, one or more, to equivalent to 40 classroom hours. e.g.
   a) site specific training
   b) material specific training
   c) vendor seminars and training
   d) a combination of short in house training sessions
   e) safety training not covered in the Warehousing program

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